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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,403	06/12/2001	Eric Johnstone Cook	025455-093	7025

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Alan E Kopecki  
Burns Doane Swecker & Mathis  
PO Box 1404  
Alexandria, VA 22313-1404

EXAMINER

ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/830,403

Applicant(s)

COOK ET AL.

Examiner

Raymond W. Addie

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 23, 25 are objected to because of the following informalities:

The phrase "second series being shorter in a circumferential direction of the roller than the wear plates of the first series"; should be --first series being shorter in a circumferential direction of the roller than the wear plates of the second series--.

To be consistent with the embodiment depicted in Fig. 2; since the salient points (20) are depicted as element (28) and the impact faces (22) are depicted as element (26).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-21, 26, 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cook et al. # 6,004,076.

Cook et al. discloses an apparatus (10) for soil compaction comprising:

At least one soil compaction roller (12) comprising a hub structure (see fig. 1). Said hub structure defining a central axis of rotation (14) and a multi-sided, out-of-round, peripheral compacting surface (20).

Said roller(s) (12), which may be mounted to a single, or independent stub axles; has/have a width, measured parallel to the axis and which is fixed, non-adjustably to an outer periphery of the hub structure, so as to be capable of rolling over a soil surface (26) that is to be compacted when the hub structure rotates about the central axis, the compacting surface being defined by a plurality of angularly spaced salient points (15). Each salient point extending parallel to the central axis.

The cross-section of each compacting face being constant across its width.

See Col. 3, Ins. 19-42; Figs. 1, 2.

Although Cook et al. does not disclose whether or not the hub structures are being arranged such that an instantaneous center of rotation of each compacting face, where that compacting face contacts the soil surface during rolling, moves continuously about the full extent of the compacting face, whereby the roller applies a continuous kneading action to the soil surface as it rolls over the soil surface; it would be obvious, if not inherent, that because the hub structure is "out-of-round", the instantaneous center of rotation, of each compacting face, moves continuously about the full extent of said compacting face, because Cook et al. clearly discloses "the arrangement being such that, when rolled over the soil surface, the compactor mass alternately rises up on a salient point and then falls downwardly for the next succeeding compacting face to apply an impact blow to the soil surface. Hence, it is clear, from the disclosure of Cook et al., that because there exists a vertical distance, between the compacting face (20) and the protruding surface of the "salient points" (15), the compactor axle (14),

which is the center of rotation of the hub structure, as well as any "instantaneous center of rotation" of any of the compacting faces (20), would correspondingly move, vertically up and down, with each cycle of rotation. Therefore, it would have been obvious, if not inherent that an instantaneous center of rotation of a compacting face, of the compacting roller of Cook et al., would move about the full extent of the compacting face, whereby the roller applies a continuous kneading action to the soil surface.

In regards to Claims 18-21 Cook et al. discloses that each compacting face (20) is smoothly, and convexly curved, such that, said compacting faces, on either side of each salient point are symmetrical with respect to one another, about a plane containing the central axis and said salient point, as well as being symmetrical about a radial bisector of 2 salient points between which, such compacting face extends. Cook et al. further discloses the salient points are equi-angularly spaced about, and equi-distant from, the central axis.

3. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. # 6004,076 in view of Eastwood, II # 3,717,380.

Cook et al. discloses essentially all that is claimed, except for the use of flat-faceted compacting faces, which in combination form an outwardly convex shape. However, Eastwood, II discloses a wheel configuration for providing a compacting effect to soil.

Said wheel configuration comprising a plurality of flat-faceted compacting faces (18a,b), which in combination with additional flat-faceted faces (20a-f) form an outwardly convex compacting surface, which further maximizes traction on a variety of soil types. See Fig. 4; col. 3, ln. 18-col. 4, ln. 48. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the compacting apparatus of Cook et al., with a wheel configuration, taught by Eastwood, II, in order to maximize traction capability of a compacting wheel.

#### ***Allowable Subject Matter***

4. Claims 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 17-22, 25-27 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicant's introduction of new claims 17-27 required a reconsideration of the prior art, and necessitated a New Grounds of Rejection, Since new claims 17 and 26 required fixed, non-adjustable compacting surface.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCallum # 2,403,812 discloses an antiskid tread.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Addie whose telephone number is (703) 305-0135. The examiner can normally be reached on Monday-Friday from 8:00 am to 2:00 pm, 6-8 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached on (703) 308-3870. The fax phone number for this Group is (703) 305-8623.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.



Thomas B. Will  
Supervisory Patent Examiner  
Group 3600

RWA  
3/01/2003